

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:	)	
	)	
<b>Felix Henric Govert Ogg et al.</b>	)	
	)	
Serial No.: 10/598,074	)	Group Art Unit: 3764
	)	
Filed: August 17, 2006	)	Examiner: Andrew M. Tecco
	)	
For: AUDIO INTERVAL TRAINING DEVICE	)	<b>Board of Patent Appeals and Interferences</b>
	)	
Confirmation No.: 9809	)	

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**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

In support of the notice of appeal filed on April 27, 2009, and pursuant to 37 C.F.R. § 41.37, Appellants present this Appeal Brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-17 in the Final Office Action dated February 18, 2009. The appealed claims are set forth in the attached Claims Appendix.

1. Real Party in Interest

This application is assigned to Koninklijke Philips Electronics N.V., the real party in interest.

2. Related Appeals and Interferences

There are no other appeals or interferences that would directly affect, be directly affected, or have a bearing on the instant appeal.

3. Status of the Claims

Claims 1-17 have been rejected in the Final Office Action. The final rejection of claims 1-17 is being appealed.

4. Status of Amendments

All amendments submitted by Appellants have been entered.

5. Summary of Claimed Subject Matter

The present invention, as recited in independent claim 1, relates to an audio interval training device (100). The device comprises a sensing unit (104) to obtain a parameter of a user in physical exercise. (See Specification, ¶¶ [0013], [0022]). The device also comprises a memory (206) to store a plurality of audio signals, each of which have a predetermined tempo value. (See Id., ¶¶ [0013], [0030]) The device also comprises a processing unit (102) configured to receive the parameter from the sensing unit, receive a first and second target parameter value, and select a first and a second audio signal. (See Id., ¶¶ [0013], [0025], [0027]). The first and second audio signals have a respective tempo corresponding to the first and second target parameter values, respectively. (See Id., ¶ [0027]). The processing unit (102) renders the first audio signal to the user at least until the processor (102) determines that the parameter has achieved the first

parameter value. (See Id., ¶¶ [0027], [0032]). Subsequently, the processing unit renders the second audio signal to the user at least until the processor determines that the parameter has achieved the second parameter value. (See Id.). The processing unit alternates the rendering of the first and second audio signals according to the above steps. (See Id.).

The present invention, as recited in independent claim 12, relates to an audio interval training method including receiving a first and second target parameter value (302) and receiving a parameter of a user in physical exercise from a sensing unit (304). (See Id., ¶ [0039]). Subsequently, a first and a second audio signal having respective tempos are selected (306). The first and second audio signals correspond to the first and second target parameter values, respectively. (See Id.). The first and second audio signals are alternatively rendered to the user until the processor determines the parameter has achieved the first and second parameters, respectively (310). (See Id.).

6. Grounds of Rejection to be Reviewed on Appeal

- I. Whether claims 1-2, 4-8, 10-14, and 17 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,230,047 to McHugh (hereinafter “McHugh”) in view of U.S. Patent No. 5,879,270 to Huish et al. (hereinafter “Huish”).
- II. Whether claim 3 is unpatentable under 35 U.S.C. § 103(a) over McHugh in view of Huish, further in view of U.S. Patent 6,736,759 to Stubbs et al. (hereinafter “Stubbs”).
- III. Whether claims 9, 15, and 16 are unpatentable over 35 U.S.C. § 103(a) over McHugh in view of Huish, further in view of U.S. Patent 5,986,200 to Curtin (hereinafter “Curtin”).

7. Argument

I. The Rejection of Claims 1-2, 4-8, 10-14, and 17 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 1-2, 4-8, 10-14, and 17 under 35 U.S.C. § 103(a) as unpatentable over McHugh in view of Huish. (See 2/18/09 Office Action, pp. 3-8.) The Examiner affirmed this rejection in the Advisory Action. (See 4/20/09 Advisory Action, p. 1).

In the Final Office Action, the Examiner asserts that McHugh teaches “using audio signals to encourage a change in the heartbeat of the user to achieve certain parameters.” (See 2/18/09 Office Action, p. 3, ll. 17-18). Specifically, the Examiner asserts that a pulse monitor (20) of McHugh teaches the recitation in claim 1 of “a sensing unit to obtain a parameter of a user in physical exercise.” (See Id.). The Examiner also asserts that a processor chip (32) of McHugh teaches the recitation in claim 1 of “a processing unit configured to (1) receive the parameter from the sensing unit.” (See Id.). It also appears that the Examiner goes on to assert that the combination of the pulse monitor (20) and the processor chip (32) also teach the recitation in claim 1 of “a processing unit configured to . . . (2) receive a first and second target parameter value.” (See Id.). In the Advisory Action the Examiner asserts that the McHugh “pulse rate monitor is capable of receiving a first target value (col. 5 lines 61-67) and a second target value (col. 6 lines 1-6).” (See 4/20/09 Advisory Action, p. 1). McHugh discloses that in order to slow a user's heartbeat, a “programmed rhythm is played at a desired, e.g., normal, heartbeat.” (See McHugh, col. 5, ll. 62-63). When the user's heartbeat reaches the normal heartbeat, McHugh states that “the programmed rhythm may continue or may halt.” (See Id., l. 67). McHugh discloses an additional aspect which is used to raise the user's heartbeat from resting level. In this aspect, a “programmed rhythm is played at a desired, or preprogrammed level, to permit the user to exercise at that level.” (See Id., col. 6, ll. 2-4). The Examiner correctly acknowledges that McHugh “fails to disclose alternating the rendering of the first and second audio signals according to (4) and (5) of claim 1.” (See 2/18/09 Office Action, p. 3). In order to cure this deficiency, the Examiner relies on Huish.

B. McHugh And Huish Do Not Disclose Or Suggest A Memory To Store A Plurality Of Audio Signals, Each Having A Predetermined Tempo Value

Claim 1 recites, “[a]n audio interval training device, comprising: a sensing unit to obtain a parameter of a user in physical exercise; a memory to store a plurality of audio signals, each having a predetermined tempo value; and a processing unit configured to (1) receive the parameter from the sensing unit, (2) receive a first and second target parameter value, (3) select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values, (4) rendering the first audio signal to the user at least until the processor determines the parameter has achieved the first parameter value, (5) rendering the second audio signal to the user at least until the processor determines the parameter has achieved the second parameter value, and (6) alternating the rendering of the first and second audio signals according to (4) and (5).”

The Examiner asserts that McHugh discloses “a memory to store a plurality of audio signals, each having a predetermined tempo value” at col. 4, line 65 – col. 5, line 5. (See 2/18/09 Office Action, p. 3). Applicants respectfully disagree. McHugh discloses that a processor chip stores “a plurality of rhythm pattern data and the chip generates rhythm tracks from the plurality of rhythm pattern data.” (See McHugh, col. 4, line 67 – col. 5, line 2). However, while the chip stores multiple rhythm patterns, these rhythm patterns do not have “predetermined tempo value[s]” as recited in claim 1. As McHugh makes abundantly clear, the tempo of the selected rhythm pattern will increase or decrease based on the user’s heart rate. (See Id. at col. 5, lines 41-44). That is, the tempo of each rhythm pattern can be increased or decreased, each rhythm pattern has a variable tempo value, not a “predetermined tempo value” as recited in claim 1.

McHugh in the embodiments disclosed with reference to Figs. 2 and 3 does include a music playback device 60 that may be “a music memory chip.” (See McHugh, col. 6, lines 47-48). However, the music from device 60 is mixed with the rhythm patterns and played back to the user. (See Id. at col. 6, lines 48-52). That is, the music on device 60 could not be considered the “plurality of audio signals” of claim 1 because as will be described in greater detail below, claim 1 further requires a processing unit to “select a first and second audio signals having a respective

tempo corresponding to the first and second target parameter values.” However, the music on device 60 is selected by the user based on desire, not on the tempo of the music. Because the music is mixed with the rhythm patterns, the user hears a tempo corresponding to heart rate, but it is not related to the music stored on device 60. Thus, this music could not be considered the “plurality of audio signals” of claim 1.

Huish does not cure these deficiencies of McHugh because Huish is not concerned with the storage of audio signals. Accordingly, neither McHugh nor Huish, either alone or in combination, disclose or suggest “a memory to store a plurality of audio signals, each having a predetermined tempo value” as recited in claim 1. Because claims 2, 4-8, and 10-11 depend on and, therefore, contain all of the limitations of claim 1, it is respectfully submitted that these claims are allowable.

C. McHugh And Huish Do Not Disclose Or Suggest (3) Select[ing] A First And Second Audio Signals Having A Respective Tempo Corresponding To The First And Second Target Parameter Values

McHugh allows a user to select a desired rhythm pattern that is stored in the chip. (See McHugh, col. 5, lines 8-10). However, as described above, the McHugh device then generates the rhythm pattern with a tempo corresponding to the user’s heart rate. McHugh does not select a rhythm pattern having a predetermined tempo, but rather takes the user input of the rhythm pattern selection and generates that rhythm pattern at any tempo. In contrast, claim 1 recites a processing unit to “select . . . audio signals having a respective tempo corresponding to . . . target parameter values.” There is no selection based on tempo in McHugh. Huish does not cure these deficiencies of McHugh because Huish is not concerned with the storage of audio signals.

Accordingly, neither McHugh nor Huish, either alone or in combination, disclose or suggest “a processing unit configured to . . . (3) select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values” as recited in claim 1. Because claims 2, 4-8, and 10-11 depend on and, therefore, contain all of the limitations of claim 1, it is respectfully submitted that these claims are allowable.

Claim 12 recites “selecting a first and second audio signal having respective tempos, corresponding to the first and second target parameter values.” Thus, this claim is allowable for the same reasons described in this section as claim 1. Because claims 13-14 and 17 depend on and, therefore, contain all of the limitations of claim 12, it is respectfully submitted that these claims are allowable.

II. The Rejection of Claim 3 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner’s Rejection

In the Final Office Action, the Examiner rejected claim 3 under 35 U.S.C. § 103(a) as unpatentable over McHugh in view of Huish and further in view of Stubbs. (See 2/18/09 Office Action, p. 8.) The Examiner affirmed this rejection in the Advisory Action. (See 4/20/09 Advisory Action, p. 1.)

B. McHugh, Huish And Stubbs Do Not Disclose Or Suggest A Memory To Store A Plurality Of Audio Signals, Each Having A Predetermined Tempo Value or (3) Select[ing] A First And Second Audio Signals Having A Respective Tempo Corresponding To The First And Second Target Parameter Values

Similar to Huish, Stubbs is not concerned with the storage of audio signals. Thus, Appellants respectfully submit that Stubbs fails to cure the deficiencies of McHugh and Huish described above with respect to claim 1. Because claim 3 depends on claim 1, it is respectfully submitted that claim 3 is allowable.

III. The Rejection of Claims 9, 15, and 16 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 9, 15, and 16 under 35 U.S.C. § 103(a) as unpatentable over McHugh in view of Huish and further in view of Curtin. (See 2/18/09 Office Action, p. 9.) The Examiner affirmed this rejection in the Advisory Action. (See 4/20/09 Advisory Action, p. 1)

B. McHugh, Huish, And Curtin Do Not Disclose Or Suggest A Memory To Store A Plurality Of Audio Signals, Each Having A Predetermined Tempo Value or (3) Select[ing] A First And Second Audio Signals Having A Respective Tempo Corresponding To The First And Second Target Parameter Values

While Curtin does discuss the storage and playback of audio signals, it fails to cure the deficiencies of McHugh and Huish described above with respect to claims 1 and 12. Because claim 9 depends on claim 1, it is respectfully submitted that claim 9 is allowable. Because claims 15 and 16 depend on claim 12, it is respectfully submitted that these claims are allowable.



8. Conclusion

For the reasons set forth above, Appellants respectfully request that the Board reverse the rejection of the claims by the Examiner under 35 U.S.C. § 103(a), and indicate that claims 1-17 are allowable.

Respectfully submitted,

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**CLAIMS APPENDIX**

1. (Previously Presented) An audio interval training device, comprising:
  - a sensing unit to obtain a parameter of a user in physical exercise;
  - a memory to store a plurality of audio signals, each having a predetermined tempo value;and
  - a processing unit configured to (1) receive the parameter from the sensing unit, (2) receive a first and second target parameter value, (3) select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values, (4) rendering the first audio signal to the user at least until the processor determines the parameter has achieved the first parameter value, (5) rendering the second audio signal to the user at least until the processor determines the parameter has achieved the second parameter value, and (6) alternating the rendering of the first and second audio signals according to (4) and (5).
2. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the parameter is a pulse rate.
3. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the parameter is a time-interval.
4. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the tempo is a beat per minute value.
5. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the sensing unit is a heart rate monitor or a timer device.
6. (Previously Presented) The audio interval training device as claimed in claim 5, wherein a respective audio signal is rendered to the user until the user's heart rate reaches the first or second target heart rate, as determined by the processing unit using a received heart rate from the heart rate monitor.

7. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the sensing unit and the processing unit are connected in a wired or wireless way.
8. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the first and second target parameter value include target parameter value selected by a user or a programmed exercise routine.
9. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the audio signals are annotated with their beat per minute value.
10. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the tempo values of the plurality of audio signal are determined either by the audio interval training device, or by an external device and transferred to the audio interval training device.
11. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the audio signals are encoded in an MP3, WAV, MPEG-4, WMA or AAC format.
12. (Previously Presented) An audio interval training method, comprising steps of:  
receiving a first and second target parameter value;  
receiving a parameter of a user in physical exercise from a sensing unit ;  
selecting a first and second audio signal having respective tempos, corresponding to the first and second target parameter values; and  
alternatively rendering the first audio signal to the user at least until a processor determines the parameter has achieved the first parameter value and the second audio signal to the user at least until the processor determines the parameter has achieved the second parameter value.
13. (Previously Presented) The audio interval training method as claimed in claim 12, further comprising the step of, a user, selecting the first and second target parameter value from a group of predetermined target parameter value or a programmed exercise routine that includes the first and second target parameter value.

14. (Previously Presented) The audio interval training method as claimed in claim 12, wherein the audio signals are encoded in an MP3, WAV, MPEG-4 or WMA format.

15. (Previously Presented) The audio interval training method as claimed in claim 12, further comprising the step of, selecting at least one of a further audio signal having respective tempos similar to the first and second audio signals.

16. (Previously Presented) The audio interval training method as claimed in claim 13, further comprising the step of, at a predetermined time, rendering at least one of a further audio signals in place of the first and second audio signals.

17. (Previously Presented) The audio interval training method as claimed in claim 12, wherein the parameter is a pulse rate or a time-interval.

**EVIDENCE APPENDIX**

No evidence has been submitted herewith or is relied upon in the present appeal.

**RELATED PROCEEDINGS APPENDIX**

No decisions have been rendered regarding the present appeal or any proceedings related thereto.